



# Australian Bureau of Statistics

## 6227.0.55.003 - Education and Work, Australia - Additional data cubes, May 2011

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## Summary

### About this Release

These data cubes provide detailed information from the Survey of Education and Work (cat. no. 6227.0) on key participation and attainment indicators in education and training. The data cubes were previously published under the main catalogue number.

### History of Changes

**This document was added or updated on 12/12/2011.**

**12/12/2011** - Time series data from 2001-2010 have been added to the 2011 data in each data cube. The data incorporate minor revisions to the 2010 data; these result in changes to population estimates for the Northern Territory but have minimal impact at the national level or on proportional estimates for all states and territories. For further information see the Explanatory Notes (cat. no. 6227.0).

## Explanatory Notes

### Explanatory Notes

#### EXPLANATORY NOTES

#### INTRODUCTION

**1** This publication contains results from the 2011 Survey of Education and Work (SEW) conducted throughout Australia in May 2011 as a supplement to the monthly Labour Force Survey (LFS). Respondents to the LFS who were in scope of the supplementary survey were asked further questions.

**2** The SEW provides a range of key indicators of educational participation and attainment of persons aged 15-74 years, along with data on people's transition between education and work. The annual time series allows for ongoing monitoring of: people presently participating

in education; level of highest non-school qualification; level of highest educational attainment; characteristics of people's transition between education and work; and data on apprentices.

**3** The publication Labour Force, Australia (cat. no. 6202.0) contains information about survey design, sample redesign, scope, coverage and population benchmarks relevant to the monthly LFS, which also apply to supplementary surveys. It also contains definitions of demographic and labour force characteristics.

## CONCEPTS SOURCES AND METHODS

**4** The conceptual framework used in Australia's LFS aligns closely with the standards and guidelines set out in Resolutions of the International Conference of Labour Statisticians. Descriptions of the underlying concepts and structure of Australia's labour force statistics, and the sources and methods used in compiling these estimates, are presented in Labour Statistics: Concepts, Sources and Methods, April 2007 (cat. no. 6102.0.55.001) which is available on the ABS website <<https://www.abs.gov.au>>.

## SCOPE

**5** The scope of the SEW was restricted to persons aged 15-74 years who were usual residents of private dwellings and excluded:

- members of the permanent defence forces
- certain diplomatic personnel of overseas governments, customarily excluded from the Census and estimated resident population figures
- overseas residents in Australia
- members of non-Australian defence forces (and their dependants) stationed in Australia
- persons who are permanently unable to work
- persons aged 65-74 years who are permanently not intending to work, or not in the labour force, or not marginally attached to the labour force
- special dwelling type institutionalised persons (e.g. patients in hospitals, residents of retirement homes, residents of homes for persons with disabilities, inmates of prisons)
- special dwelling type boarding school pupils.

**6** Boarding school pupils have been excluded from the scope of the SEW since 2005, but were included in earlier collections. The LFS in May 2011 yielded an estimate of 4,400 boarding school pupils aged 15 years and over who were excluded from the SEW.

**7** In 2009, persons aged 65-74 years who were in the labour force, or were marginally attached to the labour force, were interviewed for the first time for SEW. In May 2011 there were an estimated 323,600 persons aged 65-74 years in the labour force or marginally attached to the labour force, out of a total 1,661,900 persons aged 65-74 years. Persons were determined to be marginally attached to the labour force if they were not in the labour force in the reference week, wanted to work and:

- were actively looking for work but did not meet the availability criteria to be classified as unemployed, or
- were not actively looking for work but were available to start work within four weeks or could start work within four weeks.

**8** This supplementary survey was conducted in both urban and rural areas in all states and territories, but excluded people living in Indigenous communities in very remote parts of Australia. In 2009, persons who live in very remote areas that are not part of the Indigenous Community Frame (ICF) were interviewed for the first time for SEW. Nationally, approximately 0.5% of persons in scope of SEW in 2011 live in very remote areas that are not part of the ICF. In the Northern Territory, this proportion is 6%.

## **COVERAGE**

**9** The estimates in this publication relate to persons covered by the survey in May 2011. In the LFS, coverage rules are applied which aim to ensure that each person is associated with only one dwelling and hence has only one chance of selection in the survey. See [Labour Force, Australia \(cat. no. 6202.0\)](#) for more details.

## **DATA COLLECTION**

**10** Information was mainly collected through interviews conducted over a two week period in May 2011. Interviews were conducted either face-to-face or over the telephone. Information was obtained from any responsible adult in the household who was asked to respond on behalf of all persons in the household in scope of the survey. All interviews were conducted using computer assisted interviewing (CAI).

**11** Supplementary surveys are not always conducted using the full LFS sample. Since August 1994 the sample for supplementary surveys has been restricted to no more than seven-eighths of the LFS sample.

**12** Approximately 96% of the selected households were fully responding to the SEW, which resulted in around 39,800 completed interviews. In 2010 there was a complete reinstatement of the full LFS sample, following reductions due to budgetary reasons in 2009. This resulted in an approximately 24% larger sample size for SEW in 2010 and 2011 compared with 2009. For more information see [Information Paper: Labour Force Sample Design, Nov 2007 \(cat. no. 6269.0\)](#).

## **ESTIMATION METHOD**

### **Weighting**

**13** Weighting is the process of adjusting results from a sample survey to infer results for the total population. To do this, a 'weight' is allocated to each enumerated person. The weight is a value which indicates how many persons in the population are represented by the sample person.

**14** The first step in calculating weights for each unit is to assign an initial weight, which is the inverse of the probability of the unit being selected in the survey. For example, if the probability of a person being selected in the survey was 1 in 300, then the person would have an initial weight of 300 (that is, they represent 300 people).

### **Population benchmarks**

**15** The initial weights are then calibrated to align with independent estimates of the

population, referred to as benchmarks. The population included in the benchmarks is the survey scope. This calibration process ensures that the weighted data conform to the independently estimated distribution of the population described by the benchmarks rather than to the distribution within the sample itself. Calibration to population benchmarks helps to compensate for over or under-enumeration of particular categories of persons which may occur due to either the random nature of sampling or non-response.

**16** The survey was benchmarked to the estimated resident population (ERP) aged 15 to 74 years living in private dwellings and non-institutionalised special dwellings in each state and territory. People living in Indigenous communities in very remote parts of Australia were excluded.

## **Estimation**

**17** Survey estimates of counts of persons are obtained by summing the weights of persons with the characteristics of interest.

## **RELIABILITY OF THE ESTIMATES**

**18** All sample surveys are subject to error which can be broadly categorised as either sampling or non-sampling error.

**19** Sampling error is the difference between the published estimates, derived from a sample of persons, and the value that would have been produced if all persons in scope of the survey had been included. For more information refer to the [Technical Note](#).

**20** Non-sampling error may occur in any collection, whether it is based on a sample or a full count such as a census. Sources of non-sampling error include non-response, errors in reporting by respondents or recording answers by interviewers, and errors in coding and processing data. Every effort is made to reduce the non-sampling error by careful design and testing of the questionnaire, training and supervision of interviewers, follow-up of respondents, and extensive editing and quality control procedures at all stages of data processing.

## **SEASONAL FACTORS**

**21** The estimates are based on information collected in the survey month, and due to seasonal factors they may not be representative of other months of the year.

## **DATA QUALITY**

**22** Information recorded in this survey is essentially 'as reported' by respondents and hence may differ from that which might be obtained from other sources or via other methodologies. This factor should be considered when interpreting the estimates in this publication.

## **DATA COMPARABILITY**

### **Comparability of time series**

**23** Supplementary surveys are not always conducted on the full LFS sample. Since August

1994 the sample for supplementary surveys has been restricted to no more than seven-eighths of the LFS sample. Since it was introduced, this survey has been conducted on various proportional samples and therefore sampling errors associated with previous supplementary surveys may vary from the sampling error for this survey.

**24** Since 2005, boarding school pupils have been excluded from the scope of the SEW, but they were included in earlier collections. For more details, see paragraph 6 of the Explanatory Notes.

**25** Since 2007, industry data in the SEW are classified according to the Australian and New Zealand Standard Industrial Classification, 2006 (cat. no. 1292.0). Industry data prior to this were classified according to the Australian and New Zealand Standard Industrial Classification, 1993 (cat. no. 1292.0). Therefore, industry data from SEW prior to 2007 are not directly comparable to 2009 industry data.

**26** Since 2007, occupation data in the SEW are classified according to the Australia and New Zealand Standard Classifications of Occupations, First Edition, 2006 (cat.no. 1220.0). Occupation data prior to this were classified according to the Australia Standard Classifications of Occupations, Second Edition, 1997 (cat.no. 1220.0). Therefore, occupation data from SEW prior to 2007 are not directly comparable to 2009 occupation data.

**27** Prior to 2008, only persons aged 15-54 years were included in the apprenticeship/traineeship survey questions. In 2008, the age scope was extended to include persons aged 55-64 years for these questions. In 2009, the age scope was further extended to include persons aged 65-74 years for these questions. In 2008, the definition for apprentices and trainees changed from those employed as apprentices/trainees to include only those with a formal contract under the **Australian Apprenticeship Scheme**. Therefore data on apprentices from previous years are not directly comparable to 2008 and subsequent data. Note that **Australian School-based Apprenticeships** are excluded.

**28** Revisions are made to population benchmarks for the LFS after each five-yearly Census of Population and Housing. The last such revision was made in February 2009 to take account of the results of the **2006 Census of Population and Housing**. Estimates from supplementary surveys conducted from and including 2009 are therefore based on these 2006 population benchmarks.

## **Comparisons with other ABS surveys**

**29** Since the SEW is conducted as a supplement to the LFS, data items collected in the LFS are also available. However, there are some important differences between the two surveys. The SEW sample is a subset of the LFS sample (see Paragraph 1 of these Explanatory Notes) and the SEW had a response rate of 96% which is lower than the LFS response rate for the same period of 97%. Due to these differences between the samples, the SEW data are weighted as a separate process to the weighting of LFS data. Differences may therefore be found in the estimates collected in the LFS and published as part of the SEW when compared with estimates published in the May 2011 issue of Labour Force, Australia (cat. no. 6202.0).

**30** Additionally, estimates from the SEW may differ from the estimates produced from other ABS collections, for several reasons. The SEW is a sample survey and its results are subject to sampling error. Results may differ from other sample surveys, which are also subject to sampling error. Users should take account of the relative standard errors (RSEs) on estimates and those of other survey estimates where comparisons are made.

**31** Differences may also exist in the scope and/or coverage of the SEW compared to other surveys. Differences in estimates, when compared to the estimates of other surveys, may result from different reference periods reflecting seasonal variations, non-seasonal events that may have impacted on one period but not another, or because of underlying trends in the phenomena being measured.

**32** Finally, differences can occur as a result of using different collection methodologies. This is often evident in comparisons of similar data items reported from different ABS collections where, after taking account of definition and scope differences and sampling error, residual differences remain. These differences are often the result of the mode of the collections, such as whether data are collected by an interviewer or self-enumerated by the respondent and whether the data are collected from the person themselves or from a proxy respondent. Differences may also result from the context in which questions are asked, i.e. where in the interview the questions are asked and the nature of preceding questions. The impacts on data of different collection methodologies are difficult to quantify. As a result, every effort is made to minimise such differences.

## **CLASSIFICATIONS**

### **Country of birth**

**33** Country of birth data are classified according to the Standard Australian Classification of Countries (SACC) 1998 (Revision 2.03) (cat. no. 1269.0).

### **Industry**

**34** Industry data are classified according to the Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006 (cat. no. 1292.0).

### **Occupation**

**35** Occupation data are classified according to the Australia and New Zealand Standard Classifications of Occupations (ANZSCO), First Edition, 2006 (cat.no. 1220.0).

### **Education**

**36** Education data are coded to the Australian Standard Classification of Education, 2001 (cat. no. 1272.0). The ASCED is a national standard classification which can be applied to all sectors of the Australian education system including schools, vocational education and training and higher education. The ASCED comprises two classifications: Level of Education and Field of Education.

**37** Level of Education is defined as a function of the quality and quantity of learning involved in an educational activity. There are nine broad levels, 15 narrow levels and 64 detailed levels. For definitions of these levels see the Australian Standard Classification of Education, 2001 (cat. no. 1272.0).

**38** Field of Education is defined as the subject matter of an educational activity. Fields of education are related to each other through the similarity of subject matter, through the broad purpose for which the education is undertaken, and through the theoretical content

which underpins the subject matter. There are 12 broad fields, 71 narrow fields and 356 detailed fields. For definitions of these fields see the Australian Standard Classification of Education, 2001 (cat. no. 1272.0).

## LEVEL OF HIGHEST EDUCATIONAL ATTAINMENT

**39** Level of highest educational attainment was derived from information on highest year of school completed and level of highest non-school qualification. The derivation process determines which of the 'non-school' or 'school' attainments will be regarded as the highest. Usually the higher ranking attainment is self-evident, but in some cases some secondary education is regarded, for the purposes of obtaining a single measure, as higher than some certificate level attainments.

**40** The following decision table is used to determine which of the responses to questions on highest year of school completed (coded to ASCED Broad Level 6) and level of highest non-school qualification (coded to ASCED Broad Level 5) is regarded as the highest. It is emphasised that this table was designed for the purpose of obtaining a single value for level of highest educational attainment and is not intended to convey any other ordinality.

Decision Table: Level of Highest Educational Attainment (ASCED level of education codes)							
Highest year of school completed	Level of highest non-school qualification						
	Certificate n.f.d. (500)	Certificate III or IV n.f.d. (510)	Certificate IV (511)	Certificate III (514)	Certificate I or II n.f.d. (520)	Certificate II (521)	Certificate I (524)
Secondary Education n.f.d. (600)	Secondary Education n.f.d.	Certificate III or IV n.f.d.	Certificate IV	Certificate III	Certificate I or II n.f.d.	Certificate II	Certificate I
Senior Secondary Education n.f.d. (610)	Senior Secondary n.f.d.	Certificate III or IV n.f.d.	Certificate IV	Certificate III	Senior Secondary n.f.d.	Senior Secondary n.f.d.	Senior Secondary n.f.d.
Year 12 (611)	Year 12	Certificate III or IV n.f.d.	Certificate IV	Certificate III	Year 12	Year 12	Year 12
Year 11 (613)	Year 11	Certificate III or IV n.f.d.	Certificate IV	Certificate III	Year 11	Year 11	Year 11
Junior Secondary Education n.f.d. (620)	Junior Secondary Education n.f.d.	Certificate III or IV n.f.d.	Certificate IV	Certificate III	Certificate I or II n.f.d.	Certificate II	Certificate I
Year 10 (621)	Year 10	Certificate III or IV n.f.d.	Certificate IV	Certificate III	Year 10	Year 10	Year 10
Year 9 (622)	Year 9	Certificate III or IV n.f.d.	Certificate IV	Certificate III	Certificate I or II n.f.d.	Certificate II	Certificate I
Year 8 (623)	Year 8	Certificate III or IV n.f.d.	Certificate IV	Certificate III	Certificate I or II n.f.d.	Certificate II	Certificate I
Year 7 (624)	Year 7	Certificate III or IV n.f.d.	Certificate IV	Certificate III	Certificate I or II n.f.d.	Certificate II	Certificate I

**41** The decision table is also used to rank the information provided in a survey about the qualifications and attainments of a single individual. It does not represent any basis for comparison between differing qualifications. For example, a person whose highest year of school completed was Year 12, and whose level of highest non-school qualification was a Certificate III, would have those responses crosschecked on the decision table and would as a result have their level of highest educational attainment output as Certificate III. However,

if the same person answered 'certificate' to the highest non-school qualification question, without any further detail, it would be crosschecked against Year 12 on the decision table as Certificate not further defined. The output would then be Year 12. The decision table, therefore, does not necessarily imply that one qualification is 'higher' than the other. For more details, see Education Variables, 2002 (cat. no. 1246.0).

## **LEVEL OF EDUCATION OF CURRENT STUDY**

**42** Level of education of current study is derived using the decision table displayed above, taking into account Level of education of school study in current year and Level of education of non-school study in current year for persons who are undertaking concurrent qualifications.

## **PRODUCTS AND SERVICES**

**43** For users who wish to undertake more detailed analysis of the survey data, a basic confidentialised unit record data file (CURF) is released every two years. A CURF will be released for the 2011 survey and is proposed to be available in mid 2012. Further information about these files, including details of how they can be obtained and conditions of use, will be available on the ABS website <<https://www.abs.gov.au>>.

**44** Special tabulations are available on request. Subject to confidentiality and sampling variability constraints, tabulations can be produced from the survey incorporating data items, populations and geographic areas selected to meet individual requirements. These can be provided in printed or electronic form.

## **ACKNOWLEDGMENT**

**45** ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated; without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the **Census and Statistics Act 1905**.

## **PREVIOUS SURVEYS**

**46** Results of similar surveys have been published in previous issues. These surveys were conducted annually from February 1964 to February 1974, in May 1975 and 1976, in August 1977 and 1978, and annually in May since 1979. Results of previous surveys were published in Transition from Education to Work, Australia (cat. no. 6227.0) from 1964 to 2001. Since May 2002, the results of the survey have been published in Education and Work, Australia (cat. no. 6227.0).

## **CHANGES THIS ISSUE**

**47** Revisions have been made to the 2010 data presented in the 2011 Survey of Education and Work (SEW) release.

**48** Estimates for 2010 have been compiled using population benchmarks that incorporate revisions made to Net Overseas Migration estimates, published in the September 2008 and



September 2009 issues of Australian Demographic Statistics (cat. no. 3101.0). The revisions also include a correction to the population benchmarks for the 2010 SEW to align them with the survey scope for the Northern Territory (NT) in relation to Indigenous communities in very remote areas.

## **IMPACT ON THE ESTIMATES**

**49** The impact on the Australian estimates for SEW 2010 is minimal with the change mainly impacting on Northern Territory estimates. While the change results in a reduction in the size of the Northern Territory population estimate it has a minor impact only on the distribution of characteristics. The number of people aged 15-64 years or 65-74 years in the labour force or marginally attached to the labour force in 2010 increased by 0.9% for Australia and decreased by 8.5% for the NT. However, revisions to the civilian population benchmarks were not uniform across age groups. The largest absolute average change was to those aged 20 to 24 years.

**50** These revised benchmarks were used in the calculation of 2011 estimates making recent data comparable with revised 2010 SEW data.

## **NEXT SURVEY**

**51** The ABS intends to conduct this survey again in May 2012.

## **RELATED PUBLICATIONS**

**52** Refer to the Related Information tab for other ABS publications which may be of interest.

**53** Current publications and other products released by the ABS are available from the ABS website <<https://www.abs.gov.au>>. The ABS also issues a daily upcoming release advice on the website that details products to be released in the week ahead. The Education and Training Topics @ a Glance page also contains a wealth of information and useful references. This site can also be accessed through the ABS website.  
accessed through the ABS website.

## **Data Cubes (I-Note) - Data Cubes**

**This document was added or updated on 12/12/2011.**

The 12 detailed education data cubes have been updated to include data from 2001-2011. They incorporate minor revisions to 2010 data. For further information see the Explanatory Notes.

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